# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/887,520 | 06/25/2001 | Irit Loy | LOY=5 | 5751 |

1444        7590        03/30/2004

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| EXAMINER |
|---|
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2171 | |

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | | Application No. | Applicant(s) |
| --- | --- | --- | --- |
| **Office Action Summary** | | 09/887,520 | LOY ET AL. |
| | | Examiner | Art Unit |
| | | Etienne P LeRoux | 2171 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on *23 February 2004* .

2a) ☒ This action is **FINAL**.     2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1-51* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-51* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *25 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *12* .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

*Claim Rejections - 35 USC § 102*

1.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the

rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.      Claims 1-5, 13, 16-22, 30, 33-39, 47, 48, 50 and 51 are rejected under 35 U.S.C. 102(e) as being

anticipated by US Pat No 6,065,065 issued to Murakami et al (hereafter Murakami '065).

Regarding claims 1, 18 and 35, Murakami '065 discloses :

- initiating a session of a data management (DM) application on a first one of the nodes [master node 1b

  sends an open message, Fig 10, col 6, lines 5-15]

- running a user application on a second one of the nodes [node 1a, Fig 10, Fig 13, 14a]

- receiving a request submitted by the user application running on the second node to the parallel file

  system on the second node to perform a file operation on a file in one of the volumes of data storage

  [node 1b sends open message to node 31 I/O node 31, col 6, lines 5-15, col 3, lines 26-28 teaches nodes

  1a and 31 can be combined]

- sending a DM event message from the second node to the first node responsive to the request, for

  processing by the data management application on the first node [Fig 10, data from storage 61 to node

  1a]

Regarding claims 2, 19 and 36, Murakami '065 discloses wherein initiating the session comprises

initiating the session in accordance with a data management application programming interface (DMAPI) of the

parallel file system, and wherein receiving the request comprises processing the request using the DMAPI

[metafile 21, Fig 17]

Regarding claims 3, 20 and 37, Murakami '065 discloses receiving and processing the event message at

the first node using one or more functions of the DMAPI called by the data management application [processes

in a calculation node, Fig 15].

Regarding claims 4, 21 and 38, Murakami '065 discloses sending the event message comprises sending

the message for processing in accordance with a disposition specified by the data management application using

the DMAPI for association with an event generated by the file operation [Fig 14, S6].

Regarding claims 5, 22 and 39, Murakami '065 discloses receiving a response to the event message from

the data management application on the first node; and performing the file operation requested by the user

application on the second node subject to the response from the data management application on the first node

[Fig 14, S5].

Regarding claims 13, 30 and 47, Murakami '065 discloses wherein initiating the session of the data

management application comprises initiating a data migration application, so as to free storage space on at least

one of the volumes of data storage [col 2, lines 1-8].

Regarding claims 16, 33 and 50, examiner maintains that a data filed uniquely identifying the second

node is inherent.

Regarding claims 17, 34 and 51, Murakami '065 discloses receiving from one of the nodes other than

the first one of the nodes a call for a data management application programming interface (DMAPI) function in

connection with the session, and performing the function only if it does not

change a state of the session or of an event associated with the session [Fig 17].

### *Claim Rejections - 35 USC § 103*

3.     The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set

forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this
> title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter
> pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.     Claims 6, 23 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami '065 as

applied to claim 5 above, and further in view of Pub No US 2002/0026605 issued to Terry (hereafter Terry

'605).

Regarding claim 6, Murakami '065 discloses the essential elements of the claimed invention as noted

above except for receiving the request comprises submitting the request using a file operation thread running on

the second node. Terry '605 discloses receiving the request comprises submitting the request using a file

operation thread running on the second node [paragraph 0058]. It would have been obvious to one of ordinary

skill in the art at the time the invention was made to modify Murakami '65 to include receiving the request

comprises submitting the request using a file operation thread running on the second node as taught by Terry

'605 for the purpose of defining startup data and all computer registry data [paragraph 0058].

Furthermore, regarding claims 6 and 23, examiner maintains that blocking the thread until the response

to the event message is received from the first node is well-known and expected in the art. It would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify Murakami '065 to

include blocking the thread until the response to the event message is received from the first node for the

purpose of synchronizing parallel computer system operations.

5.     Claims 7, 9-12, 14, 15, 24, 26-29, 31, 32, 41, 43-46 and 49 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Murakami '065 as applied to claim 5 above, and further in view of Pub No US 2002/0056003

issued to Goswami (hereafter Goswami '003).

Regarding claims 7, 9, 10-12, 14, 15, 24, 26-29, 31, 32, 41, 43-46 and 49 Murakami '065 discloses the

essential elements of the claimed invention except for sending the event message comprises passing the event

message from a source physical file system (PFS) on the second node to a session PFS on the first node, and

wherein receiving the response comprises passing a response message from the session PFS to the source PFS.

Goswami '003 discloses sending the event message comprises passing the event message from a source

physical file system (PFS) on the second node to a session PFS on the first node, and wherein receiving the

response comprises passing a response message from the session PFS to the source PFS [paragraph 0024]. It

would have been obvious to one of ordinary skill in the art at the time the invention was made to modify

Murakami '065 to include sending the event message comprises passing the event message from a source

physical file system (PFS) on the second node to a session PFS on the first node, and wherein receiving the

response comprises passing a response message from the session PFS to the source PFS as taught by Goswami

'003 for the purpose of creating a session for a plurality of participants [paragraph 0024].

Regarding claims 9 and 10, examiner maintains that it would have been obvious to one of ordinary skill

in the art to further modify Goswami '003 to include receiving a second request and sending a second event

message to a second node. The ordinary skilled artisan would have been motivated to modify Goswami to

include receiving a second request and sending a second event message to a second node for the purpose of

creating a session for a plurality of participants [paragraph 0024]

Regarding claim 11, examiner maintains that it would have been obvious to one of ordinary skill in the

art at the time the invention was made to further modify Goswami '003 to include running a further user

application instance on a further one of the nodes and receiving a further request submitted to the parallel file

system by the further user application instance to perform a further file operation and sending a further event

message responsive to the further request for processing by the data management application of the first node.

The ordinarily skilled artisan would have been motivated to modify Goswami '003 to include running a further

user application instance on a further one of the nodes and receiving a further request submitted to the parallel

file system by the further user application instance to perform a further file operation and sending a further

event message responsive to the further request for processing by the data management application of the first

node for the purpose of creating a session for a plurality of participants [paragraph 0024].

Regarding claim 12, examiner maintains that it would have been obvious to one of ordinary skill in the

art at the time the invention was made to modify Goswami '003 to include the other node is the first node. The

ordinarily skilled artisan would have been motivated to modify Goswami '003 to include the other node is the

first node for the purpose performing a calculation procedure [Fig 16]

6.     Claims 8, 25 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami '065 as

applied to claim 1 above, and further in view of Pub No US 2003/0097517 issued to Haneda (hereafter

Haneda'517).

Regarding claims 8, 25 and 42, Murakami '065 discloses the essential elements of the claimed invention

except for receiving the event message at the first node; obtaining a data management access right from a

physical file system (PFS) at the first node responsive to the event message; and processing the event message

using the access right. Haneda '517 discloses receiving the event message at the first node; obtaining a data

management access right from a physical file system (PFS) at the first node responsive to the event message;

and processing the event message using the access right [paragraph 0034]. It would have been obvious to one

of ordinary skill in the art at the time the invention was made to modify Murakami '065 to include receiving the

event message at the first node; obtaining a data management access right from a physical file system (PFS) at

the first node responsive to the event message; and processing the event message using the access right as

taught by Haneda '517 for the purpose of managing logical sequential order of the files in the recording medium

[paragraph 0034].

### *Response to Arguments*

Applicant's arguments filed 12/9/2003 have been fully considered but they are not persuasive.

**First Applicant Argument:**

Applicant states in the second paragraph on page 20:

From the Examiner's remarks regarding claim 1, it appears that the Examiner considers Murakami's I/0 node 31 (Fig. 10) to be equivalent to the "first node" recited in this claim, and to perform the step of "initiating a session of a DM application." Murakami, however, makes no explicit reference to data management or DM applications, and is certainly not concerned with DM applications in the sense in which the term is known in the art and defined in the present patent application. Murakami's I/0 nodes are used simply for "inputting data to and outputting data from the secondary storage devices" (col. 3, lines 15-17). Murakami neither teaches nor suggests-that these I/0 nodes run applications let alone DM applications -- or initiate DM sessions, as required by claim 1.

**First Examiner Response:**

Examiner is not persuaded for the following reasons:

MPEP § 2111.01 requires that "[d]uring examination, the claims must be interpreted as broadly as their terms reasonably allow. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. *In re Zletz,* 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed Cir. 1989). One must bear in mind that, especially in nonchemical cases, the words in a claim are generally not limited in their meaning by what is shown or disclosed in the specification. It is only when the specification provides definitions for terms appearing in the claims that the specification can be used in interpreting claim language. *In re Vogel,* 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970)."

MPEP § 2106 210. II.C Review the Claims:

Office personnel must always remember to use the perspective of one of ordinary skill in the art. Claims and disclosures are not to be evaluated in a vacuum. If elements of an invention are well-known in the art, the applicant does not have to provide a disclosure that describes those elements. In such a case the elements will be construed as encompassing any and every art-recognized hardware or combination of hardware and software technique for implementing the defined requisite functionalities.

Data management is defined as the control of data from acquisition and input through processing, output and storage. In microcomputers, hardware manages data by gathering it, moving it, and following instructions to process t. The operating system manages the hardware and ensures that the parts of the system work in harmony so that data is stored safely and accurately. Application programs manage data by receiving and processing input according to the user's commands, and sending results to an output device or disk storage. The user also is responsible for data management by acquiring data, labeling and organizing disks, backing up data, archiving files, and removing unneeded material from the hard disk.[1]

**Second Applicant Argument:**

Applicant states in the paragraph bridging pages 20 and 21 the following:

The Examiner then goes on to associate the 'second node' of claim 1 with the calculation node 1a, and identifies the recited step of 'receiving a request' with the 'open' operation of a parallel file in Murakami's system. As Murakami shows in Fig 10, to initiate opening of a file, node 1a communicates with the master node 1b, which the passes a message to the I/O nodes. In other words, the application running on Murakami's 'second node' is not allowed to submit a request to the file system on the second node, as required by the 'receiving' step of claim 1. Applicant believes that the amendment made to this claim helps to clarify this additional point of distinction over Murakami.

**Second Examiner Response:**

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[1] Microsoft Computer Dictionary Fifth Dictionary

Examiner is not persuaded. Murakami teaches in column 3, lines 25-30 that calculation nodes 1a, 1b

and 1c can include the functions of the I/O nodes 61 and 62. Therefore, as explained in supra Office Action,

master node 1b in Figure 10 reads on Applicant's first node and the combination of I/O node 31 and slave node

1a reads on Applicant's second node.

**Third Applicant Argument:**

Furthermore, notwithstanding the patentability of claim 1, the subject matter of each of the dependent

claims in this application is believed to be independently patentable. For example, claim 2 adds the limitation

that the DM application session is initiated in accordance with a data management application programming

interface (DMAPI) of the parallel file system. In rejecting this claim, the Examiner identifies the DMAPI

recited in the claim with metafile 21, shown in Murakami's Fig 17. With all due respect to the Examiner's

position, Applicant submits that 'metafile' and 'API' are terms of art with clearly distinct meanings. A metafile

is simply a file containing information that describes or specifies another file. An API is the specific method

prescribed by a computer operating system or by an application program by which a programmer writing an

application program can make requests of the operating system or another application (definitions from

'whatis.com'). Murakami neither teaches nor suggests the use of an API, let alone a data management API as

recited in claim 2. This claim 2 is believed to be independently patentable.

**Third Examiner Response:**

Examiner is not persuaded.

MPEP § 2111.01 requires that "[d]uring examination, the claims must be interpreted as broadly as their

terms reasonably allow. This means that the words of the claim must be given their plain meaning unless

applicant has provided a clear definition in the specification. *In re Zletz,* 893 F.2d 319, 321, 13 USPQ2d 1320,

1322 (Fed Cir. 1989). One must bear in mind that, especially in nonchemical cases, the words in a claim are

generally not limited in their meaning by what is shown or disclosed in the specification. It is only when the

specification provides definitions for terms appearing in the claims that the specification can be used in

interpreting claim language. *In re Vogel*, 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970)."

MPEP § 2106 210. II.C Review the Claims:

Office personnel must always remember to use the perspective of one of ordinary skill in the art. Claims and

disclosures are not to be evaluated in a vacuum. If elements of an invention are well-known in the art, the

applicant does not have to provide a disclosure that describes those elements. In such a case the elements will

be construed as encompassing any and every art-recognized hardware or combination of hardware and software

technique for implementing the defined requisite functionalities.

Since Applicant has not pointed to a specific definition of DMAPI as included in the specification but

relies on a definition per 'whatis.com' examiner maintains that the metafile as disclosed by Murakami reads on

DMAPI per Murakami's column 3, lines 47-53 given below:

> The calculation nodes 1a, 1b, and 1c access the partition files 52a-54a and 52b-54b by referring to the
> metafile 21, through which the logical file 51 and the partition files 52a-54a and 52b-54b are linked.
> Thus, the logical file 51 can be used in, for example, an application program on the calculation nodes 1a,
> 1b, and 1c, as if the files corresponding to the logical file 51 are configured as a single file and not a
> plurality of files.

Furthermore, examiner points out that Murakami discloses user application programs in at least Figure 13.

**Fourth Applicant Argument:**

Claims 18 and 35 respectively recite computing apparatus and a computer software product, which

operate on principles similar to the method of claim 1. therefore, for the reasons argued above, claims 18 and

35 are likewise believed to patentable over Murakami. In view of the patentability of these independent claims,

dependent claims 19-22, 30, 33, 34, 36-39, 47, 48, 50 and 51 are believed to be patentable as well.

**Fourth Examiner Response:**

Examiner is not persuaded. Examiner maintains that Murakami reads on computing apparatus and

computer software product.

## *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne LeRoux whose telephone number is (703) 305-0620. The examiner can normally be reached on Monday – Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Etienne LeRoux

3/26/2004

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